IN THE SPECIFICATION

Please replace the paragraph beginning on page 2, line 10 through line 16 with the following:

In general, for a manufacturing process to be practical, it should provide a reasonable throughput. With respect to a trench etching process, in particular, it is important that the process provide a good trench etch rate (e.g., > 1μm/min ~~1um/min~~). In known etching processes of sloping an underlying film by etching resist and film at the same time, the etch gases become loaded by both resist and the film to be etched. This greatly reduces the etch rate. Also, very deep trenches cannot be etched utilizing these processes without overheating the resist. This causes further resist flow which, in turn, results in a loss of etch profile control.

Please replace the paragraph beginning on page 2, line 18 through page 3, line 11 with the following:

Existing etch processes are typically effective in etching sloped trenches to depths of up to only about 10μm ~~10um~~. Many semiconductor integrated circuits currently being fabricated, however, require trenches having depths of, for example, 80-100μm. ~~80-100um.~~ In Micro Electro Mechanical Systems (MEMS) and RF power semiconductor processes, such as LDMOS and VDMOS, for example; many new devices are emerging which have 3-dimensional structures which make use of very deep silicon trench etch processes. There is a substantial need for integrating these processes with backend metallization and interconnect processes with good trench-fill and step coverage. When such trenches are formed prior to metallization to provide electrical contacts to underlying regions, it is preferable that they have a sloped profile so as to minimize the possibility of step-coverage induced defects in the metal layer. Existing deep

trench etching processes, however, provide sidewalls which are vertical or very nearly vertical, and this makes it difficult to carry out subsequent etch processing as the steep wall profile gives rise to stingers.

Please replace the paragraph beginning on page 6, line 14 through page 7, line 4 with the following:

In general, processes such as described above may be suitable for etching sloped trenches having a depth of up to about 10μm. ~~10um.~~ However, as also indicated above, for high power RF devices such as LDMOS/VDMOS devices and MEMS devices, there is an important need to work with much deeper and more tapered trenches. There is no dry etch process available, however, that is able to etch deep tapered trenches to depths in the range of 10-100μm. ~~10-100um.~~ Furthermore, as mentioned above, even when only relatively shallow trench depths are required for particular applications, existing processes are not fully satisfactory in any event inasmuch as they suffer from various inadequacies including the lack of good control over the slope of the trench, the use of hazardous gases and the need for frequent maintenance of the process chamber.

Please replace the paragraph beginning on page 7, line 16 through page 8, line 6 with the following:

With the present invention, a tapered trench can be formed in a layer of material, such as a silicon substrate, to a desired depth; while, at the same time, maintaining excellent control over the wall profile of the trench. In addition, with the method of the present invention, tapered trenches having substantially any desired depth, including relatively shallow trenches having a

depth of, for example, about 10μm ~~10um~~ or less, up to very deep trenches having a depth of, for example, about 80-100μm ~~80-100um~~ or more, can readily be fabricated. Although it is not intended to limit the invention to any particular application, the present invention is especially suitable for use in applications such as the manufacture of MEMS and high power RF devices which often require very deep trenches in order to form numerous types of 3-dimensional structures that have been developed.

Please replace the paragraph beginning on page 13, line 19 through page 14, line 5 with the following:

With the present invention, trenches can be formed in a substrate having substantially any desired depth from, for example, rather shallow trenches of up to about 10μm ~~10um~~ deep to very deep trenches of about 80-100μm ~~80-100um~~ deep or more. The trenches can also be formed to have substantially any desired slope, for example, from about 45 degrees to about 80 degrees; while, at the same time, maintaining excellent control over the sidewall profile. By way of example, trenches having a depth of about 80μm ~~80um~~ and a slope of about 80 degrees have been accurately formed in silicon substrates using the method of the present invention.

Please replace the paragraph beginning on page 14, line 12 through page 15, line 3 with the following:

As one example of an application of the present invention, a tapered trench having a depth of 80μm ~~80um~~ and sidewalls sloped at 80 degrees can be fabricated by building up the trench with approximately 150-160 or more trench segments. Each trench segment can be formed to have a depth of about 0.4-0.5 μm ~~um~~ during each vertical etch process step; and by

enlarging the opening in the resist layer by about 0.1-0.2 μm ~~um~~ during each resist etch process step. The process can be efficiently carried out using an ICP RIE tool or another suitable tool in a time period of, for example, 80-100 minutes. In general, the process can be implemented with any etch tool that has the capability to run two etch processes alternately such as ~~an~~ a Surface Technology Systems (STS) ~~STS~~ multiplex ICP etch system. It should also be understood that the above is intended to be one example only of an application of the present invention, as the invention may be varied significantly depending on the type of tool used and on many other factors.

Please replace the paragraph beginning on page 17, line 6 through line 10 with the following:

1. As mentioned previously, the method according to the present invention can be used to etch very deep sloped trenches (up to a depth of 80-100μm ~~80-100um~~ or more); while, at the same time, the method is just as effective in etching shallower trenches (about 10μm ~~10um~~ or less). Existing procedures, on the other hand, are generally effective in forming sloped trenches up to a depth of only about 10μm. ~~10um.~~